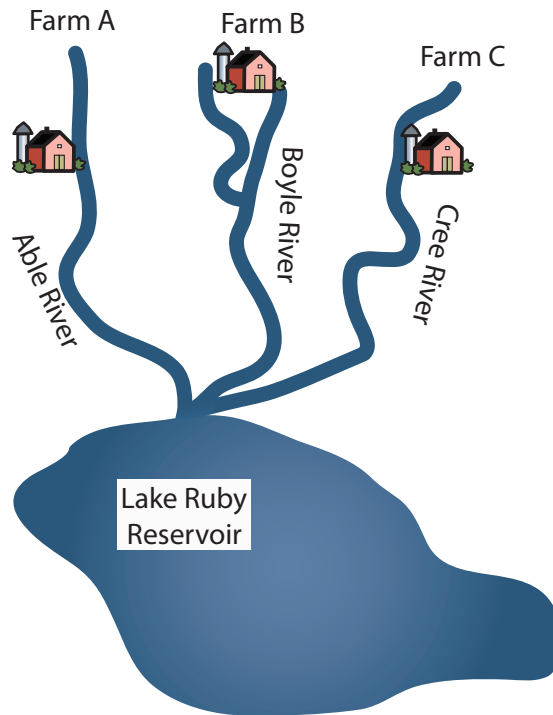


## Lake Ruby Reservoir Answers



In a small town upstate that supplies your city with food, people are falling sick with stomach illnesses and ear infections. Scientists tested Lake Ruby Reservoir, which is the water supply in the area. Testing of the deep and cold water, which is home to animals like fish and insects, identified the cause of the illnesses. Nitrogen-rich animal waste that farmers had spread onto their food crops as fertilizer got into the drinking water.

1. What new abiotic factor has entered the water?

*Nitrogen rich animal waste*

2. How does spreading animal waste benefit the daily lives of people?

*Fertilizers help crops grow more efficiently*

3. How do you think the animal waste entered into the water supply?

*It ran off from the farms into the rivers.*

4. How might animal waste affect the animals that live in the Lake Ruby Reservoir?

*The nutrients can lead to algal blooms and dead zones.*

5. There are three farms (A, B, and C) that are on three different rivers that feed into the town's reservoir, Lake Ruby. What data would support the claim that farm A and not farm B or C is responsible for the animal waste in the Reservoir?

*Nitrogen waste is found in the Able River, but not in the other rivers.*

6. Describe two other examples of how people have affected living things by changing abiotic parts of an ecosystem. Make sure you include in your answer, the change to the abiotic factor and how that change affects the living parts of the ecosystem.

*1) Light pollution – affects egg laying aquatic insects*

*2) Temperature increase due to increased carbon dioxide from fossil fuel use – melting glaciers, organisms like barnacles migrating north, etc.*

*3) Salting roads – kills freshwater plants and animals*